



Logistics Support Wide Area Network (LSWAN)

LSWAN BRIEF FOR II MEF

**Mr. Stan Kennedy
Marine Corps Systems Command, PM COMM Support**



Purpose

- Ensure audience understands all aspects of LSWAN in supporting Marine Logistic Forces in Iraq that require a communication system capable of extending wideband, over the horizon communications to the tactical commander.



Contents

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- System Mission
- Concept of Employment
- System Description and Options for Network
- OFDM
- Project Specifics: Structure, Funding, Fiscal Plan
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Project Background

- 2nd FSSG purchased 4 VSAT terminals from the Army PEOEIS office.
- II MEF U-UNS sent in November 04.
- MCSC fielded VSWAN to I MEF in support of Scan Eagle during December 04.
- MARFORPAC disapproves U-UNS in January 05.
- MCSC recommends to field VSWAN-like solution to meet the needs of the logisticians request.



System Mission

- LSWAN provides the tactical commander with over-the-horizon communications capability intra-theater.
- The network equipment allows the logisticians to access all logistic applications on the NIPR and utilize SIPR for needed BCS3 applications.
- LSWAN also provides NIPR and SIPR e-mail services, and voice.
- Terrestrial wireless capability, OFDM, allows remote users to access DISN services.



System Description

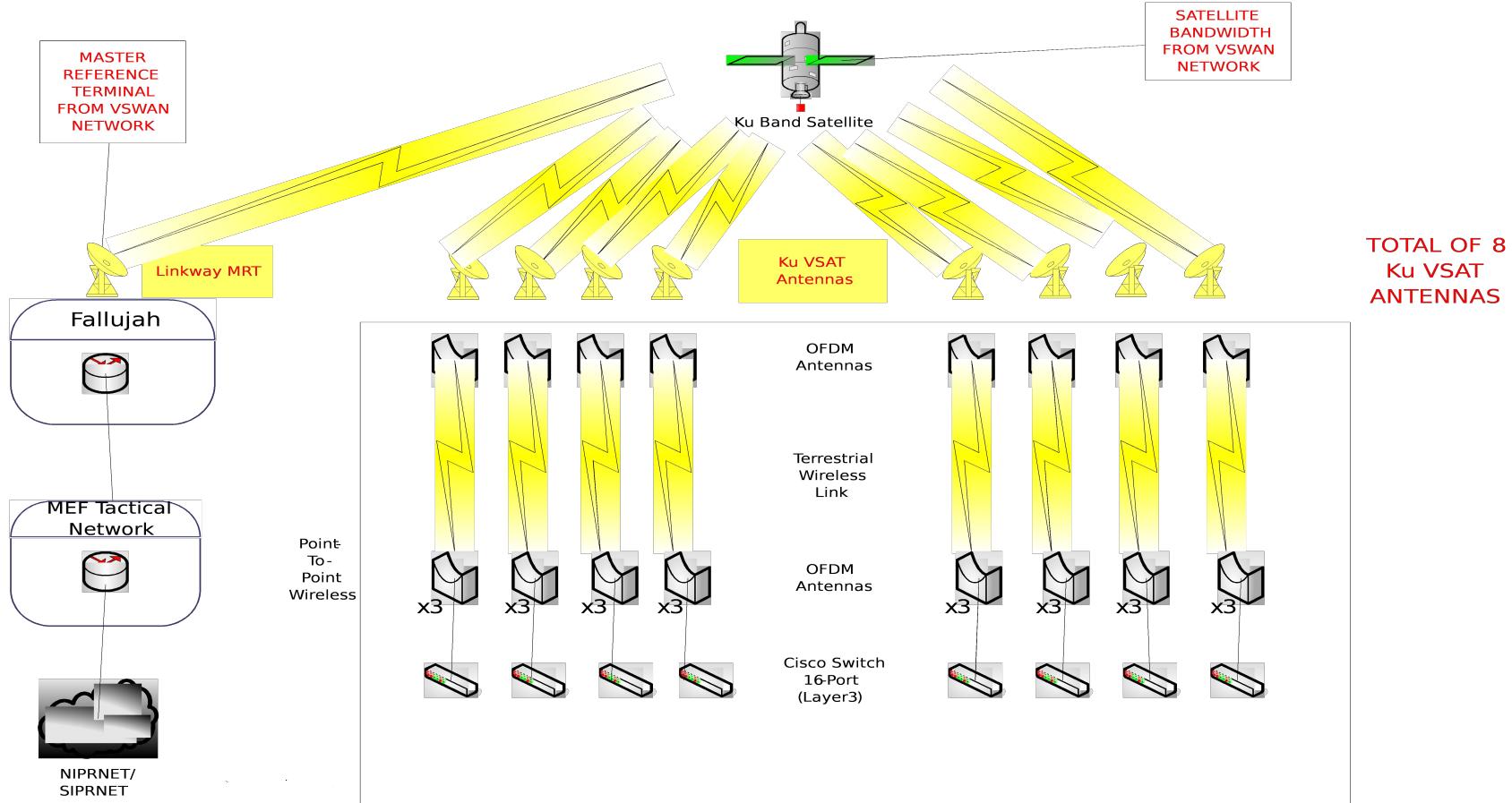
SYSTEM DESCRIPTION: LSWAN is an integrated COTS product. The major functional groups of the package are: Ku VSAT antenna, power amplifier, modem, routers, and KG-175s. The Ku VSAT terminal and baseband are packaged in transit cases--all HMMWV transportable.

- The Ku VSAT terminal is an auto-acquiring antenna.
- The modems are ViaSat's Linkway IP allowing hub and spoke or mesh architectures.
- LSWAN accesses DISN services through the existing tactical network.



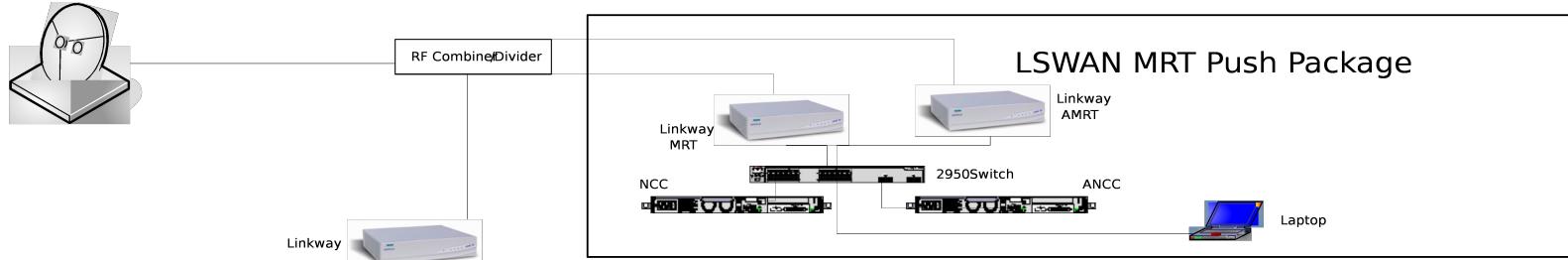
Concept of Employment

LSWAN OVERALL ARCHITECTURE FOR II MEF (OIF III)

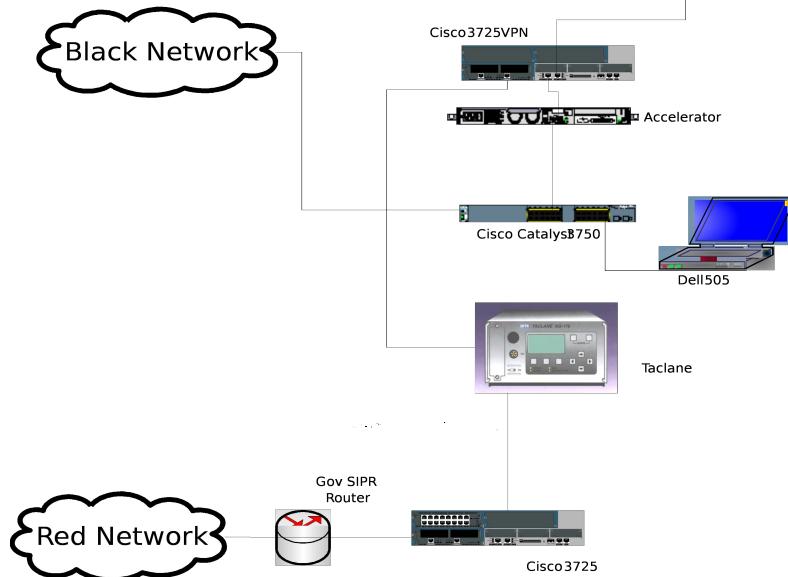




Concept of Employment



LSWAN - TT Package





OFDM



- Orthogonal Frequency Division Multiplexing (form of 802.16 - WiMax)
- AN-50 system operates in the license-exempt 5.8 GHz band.
- Delivers rates between 1.5 - 72 Mbps.
- Robust NLOS capability.
- The essence of OFDM is that it breaks up the transmitted signal into many smaller signals.
- For example, instead of one signal carrying 72 Mbps of data, there are 48 separate carriers, each carrying about 1.5 Mbps of data.



OFDM

- OFDM can communicate over hills, around buildings, and through trees for a true beyond-line-of-sight capability.





Project Structure & Funding



Testing

- MCTSSA
 - Full objective testing with logistic applications running.
 - Connected to NIPR and SIPR.
 - Meet all statement of work requirements and ensure equipment is in good condition.
 - 9 days



Training

- Vendor providing training in CONUS and Iraq.
 - CONUS training at MCTSSA and II MEF, Camp LeJeune, NC.
 - Various sites in Iraq
- Two FSRs/MCTSSA support will conduct training for Marines in theater.



Logistics & Support

- Maintenance:
 - Spares for modems and antenna components spared one-for-one with each VSAT terminal in Iraq.
 - Two LSWAN systems stay in CONUS for training.
 - Rely on vendor to provide appropriate maintenance support in theater through FSRs. They will have the capability to call back to CONUS to get technical assistance.
 - Five VSWAN FSRs are available for support if needed.
 - Any additional items needed over the spares will take several days to get into theater.



Logistics & Support (Cont.)

- Warranty: one-year for hardware
 - Option for extending warranty in 12-month increments being evaluated for cost.
- Gear transition time from Camp Pendleton to Fallujah, Iraq is 2-3 weeks.



Issues Snapshot

- **Follow on plan with the supplemental money**



Questions?
